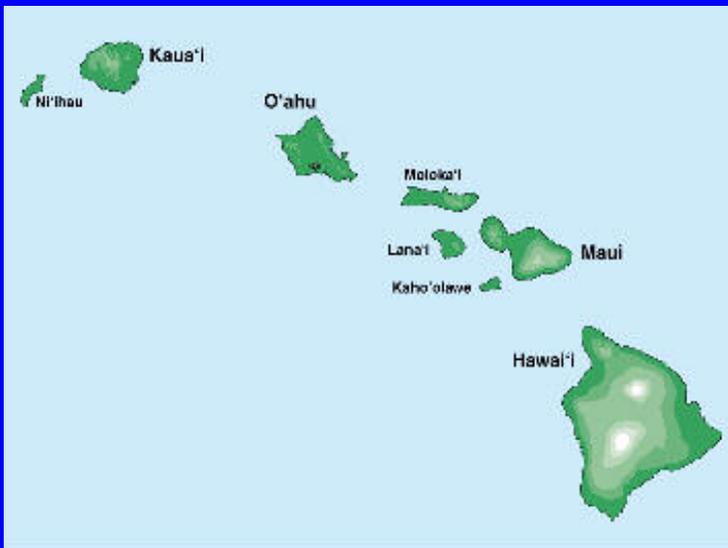


# The Honolulu Biological Incident Response Plan HBIRP



**Laurence M. Raine, DrPH - Project Coordinator**  
Emergency Medical Services System (EMSS) and Communicable  
Disease Division (CDD), Hawaii State Department of Health

# The State of Hawaii



Population 1,193,000 (1998)

~ 160,000 visitors daily.

75% of population resides on Oahu.

No bordering states for mutual support agreements.

Eight days ocean en-route transit  
- goods and consumables 98%  
by ship and 2% by air.

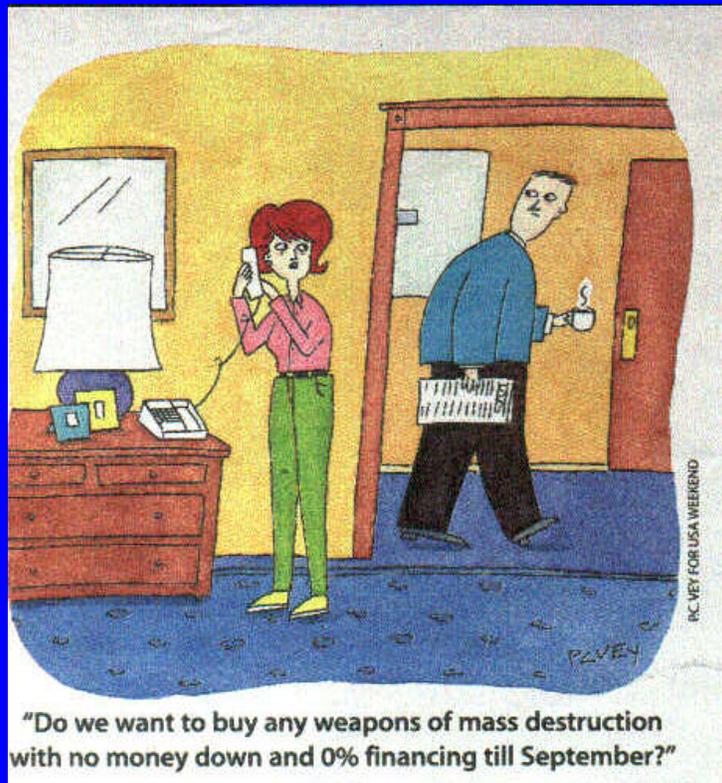
*“The Tyranny of Distance”*

-Keith Ring (CDC)

# Honolulu Biological Incident Response Plan

- Metropolitan Medical Response System (MMRS) - funded by the DHHS-OEP (October 1999 - April 2000)
- A component of the City and County of Honolulu Response Plan for Terrorist Incidents Involving Nuclear, Biological, or Chemical Agents or Weapons of Mass Destruction: Appendix 7 to Annex S of the City's Emergency Operations Plan

# WMD Popularity



*Parade Magazine - 1999*

# Bio-terrorism Preparedness

## The First Challenge: *Awareness*

- The threat is real.
- Affects the general population.
- Disruption of critical community services.
- Societal deterioration.
- Natural versus anthropogenic disasters.

# Bio-terrorism Preparedness

## The Second Challenge: Preparation

- Increased Federal spending (Nunn - Lugar - Domenici - Presidential Decision Directives 62 and 63 - Domestic Preparedness Initiatives).
- Improve public health infrastructure.
- Research and development.
- Sustainability issues.

# Bio-terrorism Preparedness

## The Third Challenge: Leadership

- Public health, medical communities, and health care facilities must take the lead.
- Physicians are the “first responders”, and must recognize and report the first cases.
- Public health officials must recognize and respond to unusual patterns of disease.
- Laboratories must have rapid diagnosis capacity.
- Electronic communications network is essential.

# Bio-terrorism Preparedness

## The Fourth Challenge: Cooperation

- Federal, state, and local planning efforts.
- Specific training for health care personnel.
- Developing infrastructure for the delivery of mass patient care.
- Integration/coordination of public health, private medical community, law enforcement, and public safety agencies.

# Honolulu Biological Incident Response Plan

- Six Components
  - Command & Control
  - Early Recognition & Surveillance
  - Mass Prophylaxis/Immunization
  - Mass Patient Care
  - Mass Fatality Management
  - Environmental Surety

# Honolulu Biological Incident Response Plan

- Develop a response plan for five “Tier 1” bio-agents: Anthrax, Brucellosis, Plague, Smallpox, Tularemia.
- Address plans for scenarios involving 1 - 500,
- 500 - 5,000, and 5,000 to 80,000 casualties and 25,000 fatalities.
- Develop plans to identify a covert bio-terrorism attack.
- Develop consequence management plans following a bio-terrorism attack.

# Early Recognition & Surveillance What We Do Every Day

Linking bio-terrorism preparedness efforts with ongoing disease surveillance and outbreak response activities is imperative.

## Early Recognition & Surveillance

- Surveillance has been augmented to improve the capacity to detect, investigate, and respond to unusual disease outbreaks and bio-terrorism events.

## Early Recognition & Surveillance

### Electronic Communicable Disease Reporting System

- Prototype automated electronic notifiable disease reporting system
- The three largest private laboratories in Hawaii participate
- Covers 60% to 70% of all notifiable disease reports in the state
- Operational since July 1998, constantly evolving
- Expand the system to include Tripler Hospital and the State Public Health Laboratory.

## Early Recognition & Surveillance HMSA Claims Data

- ICD-9/10 Codes
- Hawaii Medical Service Association (HMSA).
- Hawaii Health Information Corporation (HHIC).
- Evaluate the timeliness of infectious disease surveillance using daily electronic capture of data from these codes.

## Early Recognition & Surveillance National Electronic Death Registration System

- Daily electronic reporting of deaths in Hawaii.
- Link Office of Health Status Monitoring data with Epidemiology program.
- National Center for Health Statistics (NCHS) Super Mortality Medical Indexing Classification and Retrieval program (Super MICAR). - 30 days
- GIS capacity for geographic dispersion of outbreak(s).

## Early Recognition & Surveillance

- City and County and State EMS representative.
- Department of Health Epidemiology specialists.
- Association of Professionals in Infection Control (APIC) representative
- Health Status Monitoring and Vital Statistics representative.
- HealthCare Association Representative.

## Bio-terrorism Preparedness Education

- DOH personnel In-service training including disaster management training.
- Community Infection Control Practitioners
  - (APIC sponsored BT Conference).
- First Responders (I.e., EMS, MICTs, Pas, etc.)
- Laboratorians.
- John A. Burns School of Medicine curriculum development.
- Participation in table-top exercises with civil defense.

# Alert Notification

- Director of Health and relevant DOH programs.
- FBI, CDC.
- Civil Defense.
- Department of Agriculture.
- Medical Examiner, EMS, Police, Fire.
- All health care facilities, providers, infection control practitioners, laboratories. emergency department personnel.
- American Red Cross.
- Mental health providers.

## Early Recognition and Surveillance

- Level 1 - Casualty Event 1 - 500 People
- In-house Epidemiology Branch staff will be able to respond to the surveillance activity needed for an epidemiologic investigation.

## Early Recognition and Surveillance

- **Level 2 - Casualty Event 500 - 5000 People**
- Additional public health professionals with epidemiology training (~16) can be called to duty. An additional public health nursing staff (~55) can be activated to assist the Epidemiology Branch in investigations.
- NEPMU-6 and TAMC staff may be requested to assist the DOH Epidemiology Branch in investigations.

## Early Recognition and Surveillance

- Level 3 - Casualty Event 5000 to 10% of the Population
- CDC Epidemiologic Intelligence Service (EIS) Officers will augment the DOH staff.
- TAMC and NEPMU-6 staff “may” augment the DOH Epidemiology Staff in investigations.
- Involvement of 10% or > of the population will overwhelm DOH-EPI. Request for Federal Assistance will be required.

# Mass Prophylaxis/Immunization

- Public Information Office will disseminate DOH announcements regarding disease control measures.
- Ad Hoc and prescribed messages concerning mass prophylaxis/immunization as needed.
- Update releases on DOH Website.

# Mass Prophylaxis/Immunization

- Modular Emergency Medical Centers (MEMS) - Neighborhood Assistance Centers - will be established IF the local community can not handle an event in excess of 500 people.
- For an event of 500 - 5000 people selected PH clinics, Hospitals, Long Term Care facilities will be identified as Neighborhood Assistance Centers (NACs).

# Mass Prophylaxis/Immunization

- For an event involving 5000 to 10% of the population of Oahu all NACs (500 - 5000 people).
- Other distribution sites: district parks, neighborhood fires stations, Primary Care Association Clinics, Primary medical clinics and other governmental agencies that provide health services to special populations.

# Mass Prophylaxis/Immunization

- Distribution Centers.
  - Public Health Clinics
- Community Centers for Antibiotic Distribution
  - Neighborhood Fire Stations.
  - City and County of Honolulu Sites predetermined by OCDA.
  - Other City and State Government Facilities

# Mass Prophylaxis/Immunization



# Mass Prophylaxis/Immunization

- Staffing for mass prophylaxis and immunization functions will be the responsibility of the Community Health Nursing Division, Public Health Nursing Branch (via Health Resources Administration - HRA) as outlined in the DOH Emergency Operations Plan.

# Mass Prophylaxis/Immunization

- Health care systems Home health care providers and other agencies caring for shut-ins, homebound, homeless or disabled will operate and staff their own facilities.
- ARC contact National Offices to activate health and mental health resources to augment local health care programs.

# Mass Prophylaxis/Immunization

- Record keeping
  - PHN-98 Tracking System
  - HAH - Emergency.net
  - National Disaster Medical System (NDMS) tracking system.
- Infection Control
  - APIC and CDC recommendations:  
*Bioterrorism Readiness Plan, A template for Healthcare Facilities.*

# Mass Prophylaxis/Immunization

- Reimbursement
  - DOH will pay for pharmaceuticals/ vaccines prior to the arrival of the NPS.
  - Request from FEMA.
  - Health insurance companies - reimburse the DOH for preventive therapy to their beneficiaries.
  - Record keeping is essential for documentation of expenditures.

# Mass Prophylaxis/Immunization

- The DOH will acquire pharmaceutical supplies necessary for the first 72 hours of a mass prophylaxis/immunization program (can treat 30,000 people for 72 hours).
- Request for the National Pharmaceutical Stockpile from the CDC.

# Mass Prophylaxis/Immunization

- Level 1- Casualty Event 1- 500 People
- DOH will be able to cope with an event of this magnitude.
- NPS will NOT be required.
- Mass Prophylaxis Program will be placed on alert.

# Mass Prophylaxis/Immunization

- Level 2- Casualty Event 500 - 5000 People
- Disease control remains within the capacity of the C&C DOH and local health resources.
- NPS *MAY* be required.
- Mass Prophylaxis program will be implemented.

# Mass Prophylaxis/Immunization

- Level 3- Casualty Event 5000 to 10% of the Population.
- NPS *WILL* be required.
- State Government will require financial assistance.
- Security concerns *MAY* be covered by DoD
- Prophylaxis distribution to NACs
- Massive infusion of Federal assistance via FEMA and military support will be needed.

# Mass Patient Care

- Mass Treatment - Initial Surge.
- State - 1903 beds.
  - Honolulu - 12 hospitals with 1,519 beds
  - Less psychiatric (129), neonatal NICU (57),
  - Occupied (~1,100).
  - Total 233 beds.
    - Unstaffed ~ 145.
    - Staffed ~ 88.

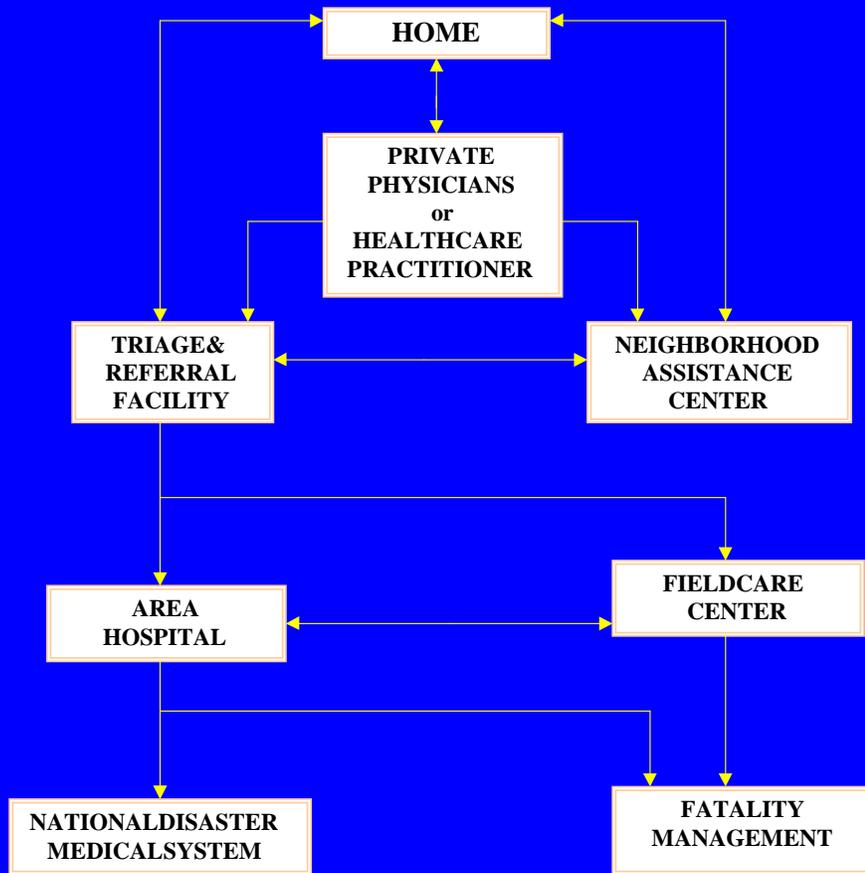
## Mass Patient Care

- Internal Augmentation of Health Care Facilities and the implementation of the Hospital Disaster and Emergency Infection Control Plan (HEICS).
- External Augmentation of Health Care Facilities (i.e., DoD, long term care, medical offices, neighbor islands, hotels, schools, etc.)

## Modular Emergency Medical System (MEMS)

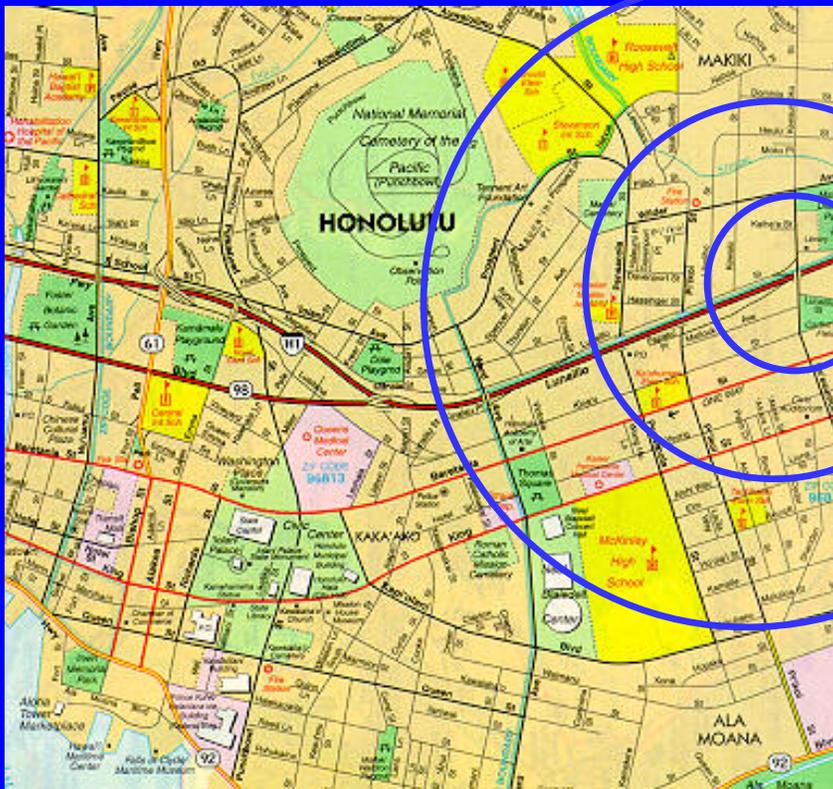
- MEMS concept is used to deliver mass prophylaxis, immunizations, and mass patient care.
- A priority would be to obtain all provisions, materials, and personnel support to care for up to 5,000 casualties/site
- Public and private area hospital would admit casualties until they approach full capacity while operating under their internal emergency operations/disaster plans.
- Non-bioterrorism related patients may be relocated.

# Modular Emergency Medical System (MEMS)



# Augmentation of HCFs

[Queen's Med. Ctr., Shriners, Kapiolani Med. Ctr, Straub Hospital]



- 1/4 mile radius: See 1/2 mile.
- 1/2 mile radius: Thomas Square  
150 tents = 6,000 cots; Neal  
Blaisdell Pkg. , 20,000 cots  
(roof), 200 tents = 8,000 cots;  
Municipal Pkg. = 9,000 cots.
- 1 mile radius: Federal Bldg. Pkg.  
= 5,000 cots; Immigration Station  
= 1,000 cots; Ward Warehouse  
Pkg. = 5,000 cots; McCoy  
Pavillion = 300 cots; Makiki  
Dist. Pk. = 3000 cots; Ala Moana  
Ctr. Pkg. = 10,000 cots; Ala  
Moana Pk. = 2,500 tents =  
100,000 cots.

# Mass Patient Care

- Centralized Control for Integrating Assets and Personnel into Local Response.
- Public Information Office.
- Patient Relocation/Integration with the National Disaster Medical System (NDMS).
- Mass Casualty Collection Points
- Mass Transportation.

# Mass Patient Care

- Volunteer Management.
  - Volunteer Centers established by the ARC.
- Access to specialists knowledgeable in treatment of BT casualties.
  - Through the FBI's Office of Strategic Information Operations Center (SIOC) and the CDC.
- Medical Treatment of Response Personnel.

# Mass Patient Care

- Mutual Aid Capacity Building.
- Patient Resources and Tracking Mechanisms.
- Pharmaceutical Medical Supplies.
- Trauma Stress Counseling.
- NDMS involvement in Mass Patient Care.
- Federal Response Plan - Emergency Services Function #8 (Health and Medical Services Annex).

# Mass Patient Care



- **United State Naval Ship - Mercy**
  - San Diego, CA
  - Activation (5 to 30 days)
  - 250, 500, 1000 bed operating levels
  - 1156 additional medical and nonmedical staff
  - Bureau of Medicine and Surgery (BUMED)
  - Contact United States Pacific Command J-3

# Mass Patient Care

- Level 1- Casualty Event 1- 500 People
- Emergency ambulance, augmented by private ambulance services will triage and transport patients according to pre-established protocols.
- C&C will activate EOC to coordinate triage and transportation of patients to all Oahu acute care facilities.
- Consideration of activation of NDMS' Disaster Medical Assistance Team (DMAT) Team

## Mass Patient Care

- Level 2- Casualty Event 500 - 5000 People
- Request to Hawaii State Civil Defense (SCD) to activate local emergency response teams to include all military ambulances.
- MEMS concept activated.
- Multiple DMAT via NDMS via SCD will be needed to augment field medical care centers and the forward movement of patients.

## Mass Patient Care

- Level 3 - Casualty Event 5000 to 10% of the Population.
- A Federal response of medical personnel will be required to augment hospital care, casualty field centers and casualty triage/treatment centers.
- The local health care system will be completely overwhelmed and will require Federal assistance to augment existing health care facilities.

# Mass Fatality Management

- Expansion of the city morgue to provide identification and rapid central processing of remains.
  - Daily case load 4 bodies: cold room capacity 35 bodies.
- Establish long-term storage facilities using refrigerated containers to hold remains for final disposition. (Matson Navigational Line 40 ft container - 100 bodies).
  - CILHI: Airline Hangers, Funeral Homes, Hospitals

# Mass Fatality Management

- Examination Center (s) Personnel
  - Administration and Supervisory Teams.
  - Medical Records Technician
  - File Clerks.
  - Communication Specialists.
  - Logistics Specialists.
  - Death Certification Specialists.
  - Reception Teams
  - Anatomical Charting/Personnel Effects/Clothing Station
  - Fingerprint Stations
  - Radiology Stations
  - Dental Stations
  - Autopsy Stations
  - Forensic and Pathologist Assistants
  - Photographer
  - Transport Stations

# Mass Fatality Management

- Family Assistance Centers
  - Collaboration with the ARC/DOH AMH/DOH Office of Health Status Monitoring/Funeral Directors and Hospice Hawaii
  - Gathering antemortem information.
  - Sharing Information with families.
  - Developing a notification procedure.
  - Providing information and services to family members post event.

# Mass Fatality Management

- **Level 1 - Casualty Event 1 - 350 People**
  - One to 350 fatalities can be managed by the Department of the Medical Examiner.
  - As fatalities approach 100 ... deployment of the National Disaster Medical System (NDMS) Disaster Mortuary Team (DMORT) will be requested to assist the Department of the Medical Examiner will be considered.

# Mass Fatality Management

- **Level 2 - Casualty Event 350 - 5000 People**
  - As Fatalities greater than 350 ... deployment of the National Disaster Medical System (NDMS) Disaster Mortuary Team (DMORT) will be requested to assist the Dept. of the Medical Examiner will be considered.

# Mass Fatality Management

- Level 3 - Casualty/Fatality Event 5000 to 10% of the Population of Hawaii
  - Full involvement of Federal Assets is necessary.
  - Preservation of bodies in anticipation of identification is primary objective.
  - Refrigerated containers will be needed to store fatalities.

# Environmental Surety

- The City is prepared for its role of first responder.
- The City will supply:
  - Emergency scene management.
  - Rescue.
  - Scene security and safety.
  - Emergency decontamination.
  - Emergency Medical Services (EMS).
  - Agent Containment.
  - Law enforcement.

# Environmental Surety

- The City's ability to respond to a Hot Zone following a BT incident is limited to the Fire Department and its specialized HAZMAT company.
- HAZMAT is developing WMD/NBC emergency response capabilities under the MMRS Program.
- FEMA's Federal Response Plan tasks the EPA (annex: terrorism incidents) to support the Federal Response to WMD via the National Contingency Plan to support response operations.

# Environmental Surety

- In 1998 the EPA was tasked by the National Security Council to develop a Biological Agent Decontamination Plan. This plan has not been developed as of August 2000. However the EPA is responsible for decontamination and environmental cleanup.

# Environmental Surety

- All response personnel must wear Level A personal protective gear (PPE) until appropriate response PPE can be determined.
  - 95 N masks used for TB.
- Hawaii State Laboratories Division and EPMU-6
- State Department of Health - Vector Control Branch.

# Environmental Surety

- DOH Public Information Office
  - Information concerning contamination and remediation efforts.
- The EPA (Federal Response Plan/FEMA) will designate a Federal On-Scene-Coordinator to represent the Federal Government for the environmental response.
- EPA Contractor Resources
  - Superfund Technical Assessment and Response Team (START) - quick response.
  - Emergency and Rapid Response Services (ERRS) - can mobilize in 2-48 hours).

## Environmental Surety

- Level 1 - Casualty Event 1 - 500 People
- The City has no in-house environmental surety and remediation expertise related to terrorism-related issues (i.e., EMS, ME, Fire, Police, public works).
- The DOH Hazard Evaluation and Emergency Response Office (HEER) will take over the lead in environmental surety management. Unified Command System.

## Environmental Surety

- Level 2 - Casualty Event 500 - 5000 People
- Full State involvement and leadership will be required.
- Federal assets will be initiated via FEMA, in-state military commands (MOUs/MOAs). OCDA and HSCD will participate in environmental surety support.

## Environmental Surety

- Level 3 - Casualty Event 5000 to 10% of the Population
- All available state assets are fully committed to the environmental challenge.
- Federal assistance via FEMA and continental support from START and ERRS will be required.

... the best laid plans of mice and men ...

- John Steinbeck